

Notice of Allowability

Application No.

10/731,729

Examiner

William K Cheung

Applicant(s)

REIMERS ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Drawings.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 5/3/04 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0503
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney Gene L. Tyler (Registration No. 35,395) on October 17, 2004.

2. Claim 4 (line 1), replace "4" with "3".

Allowances

3. Claims 1-22 are allowed.

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4. The following is an examiner's statement of reasons for allowance:

As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the closest prior art of Lange et al. (US 5,151,474) to render the present invention anticipated or obvious to one of ordinary skill in the art.

*The invention of claims 1-18 relates to a **process for preparing a polymer** comprising preparing a polymer using a process having at least one **process stream**, the at least one process stream having at least one **characteristic of interest**, and the process further comprising passing the at least one **process stream past a sensor probe connected to a near-IR spectrophotometer and passing light from a light source through the probe and into the spectrometer wherein the light source, spectrometer and sensor probe are connected by a fiber optic cable**; and wherein the **effect of the interaction of the process stream and the light passing through the sensor probe is measured and used** to define a value for the at least one characteristic of interest, and wherein the value for the at least one characteristic of interest is a **component of an algorithm used in real time to monitor, control, or monitor and control the process for preparing a polymer**.*

*The invention of claims 19-20 relate to a **process for preparing a polystyrene** comprising preparing polystyrene using a process having at least one **process stream**, the at least one process stream having at least one **characteristic of interest**, and the*

*process further comprising **passing the at least one process stream past a sensor probe connected to a near-IR spectrophotometer and passing light from a light source through the probe and into the spectrometer wherein the light source, spectrometer and sensor probe are connected by a fiber optic cable; and wherein the effect of the interaction of the process stream and the light passing through the sensor probe is measured and used to define a value for the at least one characteristic of interest; and wherein the value for the at least one characteristic of interest is a component of an algorithm used in real time to monitor, control, or monitor and control the process for preparing polystyrene.***

*The invention of claims 21-21 relates to a **process for preparing a polyethylene comprising preparing polyethylene using a process having at least one process stream, the at least one process stream having at least one characteristic of interest, and the process further comprising passing the at least one process stream past a sensor probe connected to a near-IR spectrophotometer and passing light from a light source through the probe and into the spectrometer wherein the light source, spectrometer and sensor probe are connected by a fiber optic cable; and wherein the effect of the interaction of the process stream and the light passing through the sensor probe is measured and used to define a value for the at least one characteristic of interest; and wherein the value for the at least one characteristic of interest is a component of an algorithm used in real time to monitor, control, or monitor and control the process for preparing polyethylene.***

The closest prior art Lange et al. discloses a process controlling polyolefin polymerization process using an infrared spectrometer. However, Lange et al. are silent on a process for controlling a polymerization process using a near-IR spectrophotometer and passing light from a light source through the probe and into the spectrometer wherein the light source, spectrometer and sensor probe are connected by a fiber optic cable. Therefore, it would not be apparent to one of ordinary skill in art to use the process teachings in Lange et al. to obtain the inventions of claims 1-22. Claims 1-22 are allowed.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William K. Cheung

Primary Patent Examiner

October 17, 2004

**WILLIAM K. CHEUNG
PRIMARY EXAMINER**